



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,934	11/03/2003	Ikuo Takahashi	032044	5043
38834	7590	04/16/2007		EXAMINER
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP				NUTTER, NATHAN M
1250 CONNECTICUT AVENUE, NW				
SUITE 700			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036			1711	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE		DELIVERY MODE
3 MONTHS		04/16/2007		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/698,934	TAKAHASHI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Nathan M. Nutter	1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 February 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3,4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3,4 and 6-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION*****Response to Amendment***

In response to the amendment filed 26 February 2007, the following is being placed in effect.

The rejection of claim 10 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, is hereby expressly withdrawn.

***Declaration***

The Declaration of Iida of 26 February 2007 has been considered but is not deemed to be relevant to the rejections set out below. The Declarant avers "that a carbodiimide compound and a benzotriazole-based compound do not exhibit a synergistic effect when they are used together with an aromatic polyester." The thrust of the rejections set out below with regard to these additives is drawn to aliphatic polyesters. The reference to Imamura et al and Ariga et al both employ aliphatic polyesters, just as recited and claimed herein. The references teach the uses of these additives with aliphatic polyesters, as known. The secondary references show the employment of the carbodiimides and benzotriazole compounds as known to be used together in polyesters. The rejections were made under 35 USC 103. As such, the Declaration does not address the reasons for the rejections, as they relate to the closest available prior art, and the reasoning as set out in the prior Office Action.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 4 and 6-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 11/051,462 in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843). The copending application teaches the manufacture of a biodegradable plastic composition that at paragraphs [0044] to [0049] employs a carbodiimide and at paragraph [0126] may employ UV absorbing agents.

The reference to Murschall et al (US 6,855,758), previously cited, shows the combination for inclusion in polyesters at column 3 (lines 39-54) for the carbodiimides and column 7 (lines 10 et seq.) for the UV stabilizers, including

benzotriazoles. The reference teaches clearly that the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at column 7 (lines 57-60).

The reference to Murschall et al (US 2003/0091843), previously cited, shows the conjunctive use of the carbodiimides with a benzotriazole UV stabilizer for inclusion in polyesters at paragraphs [0017], [0019], [0053]-[0058]. Again, this reference shows the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at paragraph [0053].

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of the copending application, on the suggestion thereof in said copending application, would have been obvious.

This is a provisional obviousness-type double patenting rejection.

Claims 1, 3, 4 and 6-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 11/172,904 in view of Murschall et al (US 6,855,758), or Murschall et al (US 2003/0091843). The copending application teaches the manufacture of a biodegradable plastic composition that in claims 1-13 employs a carbodiimide and at paragraph [0059] may employ UV absorbing agents.

The reference to Murschall et al (US 6,855,758), previously cited, shows the combination for inclusion in polyesters at column 3 (lines 39-54) for the

carbodiimides and column 7 (lines 10 et seq.) for the UV stabilizers, including benzotriazoles. The reference teaches clearly that the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at column 7 (lines 57-60).

The reference to Murschall et al (US 2003/0091843), previously cited, shows the conjunctive use of the carbodiimides with a benzotriazole UV stabilizer for inclusion in polyesters at paragraphs [0017], [0019], [0053]-[0058]. Again, this reference shows the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at paragraph [0053].

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of the copending application, on the suggestion thereof in said copending application, would have been obvious.

This is a provisional obviousness-type double patenting rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imamura et al (US 5,616,657) taken in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843).

The reference to Imamura et al shows the aliphatic polyester at column 6 (lines 43-50). The reference teaches throughout the production of the polyester from aliphatic components. Note the many Examples. Further, note column 19 (lines 29-38) for the inclusion of ultraviolet inhibitors, including benzotriazoles and a stabilizer, including carbodiimides.

The reference to Murschall et al (US 6,855,758), previously cited, shows the combination for inclusion in polyesters at column 3 (lines 39-54) for the carbodiimides and column 7 (lines 10 et seq.) for the UV stabilizers, including benzotriazoles. The reference teaches clearly that the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at column 7 (lines 57-60).

The reference to Murschall et al (US 2003/0091843), previously cited, shows the conjunctive use of the carbodiimides with a benzotriazole UV stabilizer for inclusion in polyesters at paragraphs [0017], [0019], [0053]-[0058]. Again, this reference shows the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at paragraph [0053].

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of Imamura et al, on the suggestion thereof would have been obvious to an artisan of ordinary skill.

Claims 1, 3, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariga et al (US 6,803,443) taken in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843).

The reference to Ariga et al shows the aliphatic polyester at column 2 (line 51) to column 3 (line 9), column 4 (lines 14 et seq.) and the many Examples. The reference teaches throughout the production of the polyester from aliphatic components. Further, note column 14 (lines 21-37) for the inclusion of benzotriazole-based ultraviolet inhibitors, and a stabilizer, including carbodiimides.

The reference to Murschall et al (US 6,855,758), previously cited, shows the combination for inclusion in polyesters at column 3 (lines 39-54) for the carbodiimides and column 7 (lines 10 et seq.) for the UV stabilizers, including benzotriazoles. The reference teaches clearly that the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at column 7 (lines 57-60).

The reference to Murschall et al (US 2003/0091843), previously cited, shows the conjunctive use of the carbodiimides with a benzotriazole UV stabilizer for inclusion in polyesters at paragraphs [0017], [0019], [0053]-[0058]. Again, this reference shows the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at paragraph [0053].

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the

composition of Ariga et al, on the suggestion thereof, would have been obvious to an artisan of ordinary skill.

### ***Response to Arguments***

With regard to the provisional rejection of claims 1, 3, 4 and 6-10 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 11/051,462 in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843), it is pointed out that the claims of that application require only a "biodegradable plastic" of which aliphatic polyesters would be embraced, with identical additives. Applicants have not explained why the rejection is untenable, except that the instant invention shows "unexpected synergistic results." Since both Murschall et al ('758) and Murschall et al ('843) both are relied upon solely to show the known use of these constituents together, the rejection is being maintained, for the reasons set out. No timely filed Terminal Disclaimer has been submitted.

With regard to the provisional rejection of claims 1, 3, 4 and 6-10 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 11/172,904 in view of Murschall et al (US 6,855,758), or Murschall et al (US 2003/0091843), the copending application recites the inclusion of a carbodiimide and an amine compound, which may be the hydroxylamine recited herein. Applicants have not explained why the rejection is untenable, except that the instant invention shows "unexpected synergistic results." Since both Murschall et al ('758) and Murschall

Art Unit: 1711

et al ('843) both are relied upon solely to show the known use of these constituents together, the rejection is being maintained, for the reasons set out. No timely filed Terminal Disclaimer has been submitted.

With regard to the rejection of claims 1, 3, 4 and 6-10 under 35 U.S.C. 103(a) as being unpatentable over Imamura et al (US 5,616,657) taken in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843), it is pointed out that Imamura et al clearly teach at column 19 (lines 32-38) that (a) an oxidation inhibitor, (b) "an ultraviolet absorbent such as.... (c) benzotriazole or a stabilizer.... and (d) carbodiimide may be used." Thus, either (a) or (b) or (c) is used, and (d) is used. That clearly embraces the choice of (b) benzotriazole and (d) carbodiimide. Regardless, suggestion of the compounds is sufficient to motivate a skilled artisan to employ. The secondary references show the choice of the two recited herein as known.

With regard to the rejection of claims 1, 3, 4 and 6-10 under 35 U.S.C. 103(a) as being unpatentable over Ariga et al (US 6,803,443) taken in view of Murschall et al (US 6,855,758) or Murschall et al (US 2003/0091843), the reference teaches these constituents as known. Regardless, suggestion of the compounds is sufficient to motivate a skilled artisan to employ. The secondary references show the choice of the two recited herein as known.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is

Art Unit: 1711

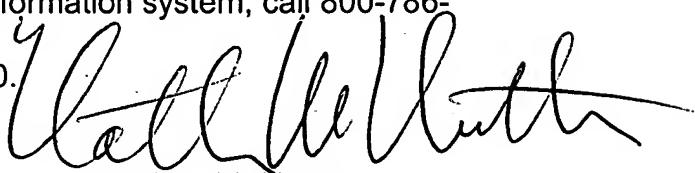
filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter  
Primary Examiner  
Art Unit 1711

nmn

10 April 2007